COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

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GRACE ROBINSON HYDE
Chief Engineer and General Manager

June 26, 2015
File No. 31-320.10

Mr. Chris Marks
Denali Water Solutions
12812 Valley View St., #9
Garden Grove, CA 92845

Dear Mr. Marks:

Transmittal of LACSD JWPCP Biosolids Report

Attached please find the LACSD JWPCP Biosolids Report for May 2015. The Report includes the following data for your files:

Biosolids
- total and soluble metals
- digester performance
- detected priority pollutants
- miscellaneous constituents

I certify, under penalty of law, that the Class B pathogen reduction requirements in 503.32(b)(3) and the vector attraction reduction requirements in 503.33(b)(1) have been met. These determinations have been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

I certify, under penalty of law, that the biosolids produced at JWPCP are non-hazardous in accordance with Title 22, California Code of Regulations (CCR), Division 4.5, Chapter 11, Article 3, Section 66261.24(a)(2)(A) Table II (Priority Pollutant Metals).

Attached are the analytical testing results for JWPCP in accordance with Title 22, California Code of Regulations (CCR), Division 4.5, Chapter 11, Article 3, Section 66261.24(a)(2)(A) Table II (Priority Pollutant Metals).

Should you have any further questions or require additional information, please contact Tom C. Fang at (562) 908-4288, extension 2825.

Very truly yours,
Grace Robinson Hyde

Melissa Fischer
Supervising Engineer
Monitoring Section

MF:TF:GS:lmb
Attachments

#2916758

Notice and Necessary Information

To be Completed by Preparers of Class B Biosolids

Facility Name: Joint Water Pollution Control Plant (JWPCP) **Monitoring Period:** 05/01/2015 to 05/31/2015

1. Pollutant and Nitrogen concentrations (report results in mg/kg on a 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH_3-N	% solids
Result	6.22	6.43	392	17.4	1.18	26.2	49.0	20.4	870	48,300	5,980	28.5
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 05/05/15 **Sample Number(s):** 15050500223

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

√ anaerobic for 20 days at 35.6 °C (96.1 °F) (range for past month)
Class B: either 15 days at 35°C to 55°C or 60 days at 20°C

___ aerobic digestion for ____to ____ days at _____to ____ degrees F / C (range for past month)
Class B: time (days) ≥ 20 - 15(temp, degrees C) for times between 40 and 60 days

___ drying beds for ____to_____ months (attach records of dates in and out)
Class B: time > 3 months; 2 months > 0 degrees C

___ fecal coliform: geometric mean of seven samples = _____ (attach lab results)
Class B: geometric mean of seven samples is < 2,000,000 mpn

___ lime stabilization: pH at 2 hours after addition = _____
Class B: pH 2 hours after addition of lime is ≥ 12

3. Vector Attraction Reduction:

√ Option 1: % VS_{in} = 75 % VS_{out} = 59 % VSR = 52 % per Van Kleeck method
VAR: VSR > 38%

____ Option 2/3: Bench scale test: % VSR = _____ after ____ days
VAR: additional VSR < 17% after 40 days (anaerobic), < 15% after 30 days (aerobic)

____ Option 4: SOUR = _____
VAR: SOUR < 1.5 mg O_2/hr/gram (dry weight)

____ Option 5: Composted _____ days at temps of _____ to _____degrees F/C (attach times/temps)
VAR: temp > 40 degrees C for 14 days, w/5 days > 45 degrees C

____ Option 6: time alkali added: _____ pH after 2 hours = ___ pH after 22 hours = ___
VAR: pH ≥ 12 for 2 hours after alkali addition, ≥ 11.5 for additional 22 hrs

____ Option 7: % solids = _____ Stabilization method: _____
VAR: stabilized solids > 75%

____ Option 8: % solids = _____
VAR: unstabilized solids > 90%

____ Option 9/10: Applier will inject/incorporate within _____ hours
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Melissa Fischer - Supervising Engineer

Phone: (562) 908-4288 Extension 2824 **E-mail:** mfischer@lacsd.org

Prepared By: G. Salva GS **Reviewed By:** M. Copeland MC T. Fang TCF

Signature: _____ **Date:** 29 Jun 15

May 2015 BIOSOLIDS MANAGEMENT PROGRAM
JWPCP Biosolids Cake -Total Metals Concentrations
mg/kg Dry Weight

Sample No.	Date	% TS	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	Al
15010700297	1/6/2015	28.8	6.89	4.9	72.3	400	15.1	0.89	20.7	53.3	23.0	886	7,170
15020400164	2/3/2015	28.1	6.90	6.76	75.0	366	14.5	0.93	23.1	48.1	20.9	855	-
15030400179	3/3/2015	28.5	6.83	6.88	71.2	336	14.8	1.41	22.3	46.2	21.6	830	-
15040800150	4/7/2015	28.6	6.34	6.4	70.8	361	16.8	1.10	22.5	52.0	20.9	842	7,900
15050600223	5/5/2015	28.5	6.22	6.43	68.0	392	17.4	1.18	26.2	49.0	20.4	870	-
MEAN		**28.5**	**6.64**	**6.3**	**71.5**	**371**	**15.7**	**1.10**	**23.0**	**49.7**	**21.4**	**857**	**7,540**
MAX			**6.90**	**6.88**	**75.0**	**400**	**17.4**	**1.41**	**26.2**	**53.3**	**23.0**	**886**	**7,900**
TABLE 1 LIMITS		****	**75**	**85**	****	**4,300**	**840**	**57**	**75**	**420**	**100**	**7,500**	****
TABLE 3 LIMITS		****	**41**	**39**	****	**1,500**	**300**	**17**	****	**420**	**100**	**2,800**	****

Sample No.	Date	% TS	Sb	Ba	Be	Co	Fe	Mn	K	Ag	Tl	Sn	V
15010700297	1/6/2015	28.8	4.50	1,270	< 0.20	8.20	112,000	278	1,010	4.01	< 0.20	38.5	71.4
15020400164	2/3/2015	28.1	-	-	-	-	-	-	-	-	-	-	-
15030400179	3/3/2015	28.5	-	-	-	-	-	-	-	-	-	-	-
15040800150	4/7/2015	28.6	3.02	1,200	< 0.20	7.67	99,600	291	925	5.56	< 0.20	40.0	59.8
15050600223	5/5/2015	28.5	-	-	-	-	-	-	-	-	-	-	-
MEAN		**28.5**	**3.76**	**1,240**	**ND**	**7.94**	**105,800**	**285**	**968**	**4.79**	**ND**	**39.3**	**65.6**
MAX			**4.50**	**1,270**	**ND**	**8.20**	**112,000**	**291**	**1,010**	**5.56**	**ND**	**40.0**	**71.4**

\ = No limit
ND = Not Detected
-- = No Sample
Statistics use detected values only

May 2015 BIOSOLIDS MANAGEMENT PROGRAM
JWPCP Biosolids Cake - Nutrients and Miscellaneous Constituents
mg/kg Dry Weight (or as indicated)

Sample No.	Date	% TS	Sulfur	PO_4	NH_3-N	Org-N	NO_3-N	NO_2-N	Boron	Paint FilterTest (ml/100 g)	pH
15010700297	1/6/2015	28.8	61,900 [A]	78,600	6,190	49,600	< 139	< 3.46	26.4	< 1.0	8.1
15020400164	2/3/2015	28.1	38,600 [B]	-	7,610	47,400	< 141	4.15	-	-	-
15030400179	3/3/2015	28.5	43,300 [C]	-	6,220	47,900	< 140	5.52	-	-	-
15040800150	4/7/2015	28.6	46,300 [D]	90,500	5,260	45,000	< 140	3.65	25.0	< 1.0	8.1
15050600223	5/5/2015	28.5	53,200 [E]	-	5,980	48,300	< 138	3.53	-	-	-
MEAN		**28.5**	**47,500**	**84,600**	**6,250**	**47,600**	**ND**	**4.21**	**25.7**	**ND**	**8.1**
MAX			**61,900**	**90,500**	**7,610**	**49,600**	**ND**	**4.15**	**26.4**	**ND**	**8.1**

ND = Not Detected
- = No Sample
Statistics use detected values only.
A = Lab ID: 15010700298
B = Lab ID: 15020300163
C = Lab ID: 15030400180
D = Lab ID: 15040700149
E = Lab ID: 15050600223

2nd Quarter 2015 BIOSOLIDS MANAGEMENT PROGRAM
JWPCP Biosolids Cake - Soluble Metals Concentrations - mg/L
Analyzed by California Title 22 Waste Extraction Test

Sample No.	Date	Al	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Fe
15010700300	1/6/2015	131	0.0388	0.101	38.9	< 0.010	< 0.005	1.05	0.130	0.0449	2,360
15040800152	4/7/2015	184	0.0391	0.122	43.6	< 0.010	< 0.005	0.986	0.11	< 0.004	2,570
MEAN		**158**	**0.0390**	**0.112**	**41.3**	**ND**	**ND**	**1.018**	**0.120**	**0.0449**	**2,470**
MAX		**184**	**0.0391**	**0.122**	**43.6**	**ND**	**ND**	**1.05**	**0.130**	**0.0449**	**2,570**
TITLE 22 STLCs		****	**15**	**5.0**	**100**	**0.75**	**1**	**5**	**80**	**25**	****

Sample No.	Date	Pb	Hg	Mo	Ni	K	Se	Ag	Tl	Sn	V	Zn
15010700300	1/6/2015	< 0.010	< 0.0005	0.273	0.933	< 0.04	0.0248	< 0.02	< 0.04	< 0.04	1.37	15.0
15040800152	4/7/2015	0.0110	< 0.0005	0.254	0.953	< 0.04	0.0312	< 0.02	< 0.04	< 0.04	1.15	18.0
MEAN		**0.0110**	**ND**	**0.264**	**0.943**	**ND**	**0.0280**	**ND**	**ND**	**ND**	**1.26**	**17**
MAX		**0.0110**	**ND**	**0.273**	**0.953**	**ND**	**0.0312**	**ND**	**ND**	**ND**	**1.37**	**18**
TITLE 22 STLCs		**5.0**	**0.2**	**350**	**20**	****	**1.0**	**5**	**7.0**	****	**24**	**250**

ND = Not Detected
\ = No Limit
Statistics use detected values only.

May 2015 BIOSOLIDS MANAGEMENT PROGRAM

JWPCP Digester Performance

Month	Temp (°F)	Detention Time (Days)	VSD (%)
January	96.1	19	54
February	96.0	19	53
March	96.2	19	54
April	96.2	20	54
May	96.1	20	52
MEAN	**96.1**	**19**	**53**
MIN	**96.0**	**19**	**52**

Semi-Annual JWPCP Biosolids Cake
Detected Priority Pollutants
mg/kg on a Dry Weight Basis

Date	1/6/15
Sample Number	15010700297
	15010700298
Constituent	**Result (mg/kg)**
Arsenic	6.89
Cadmium	4.9
Chromium	72.3
Copper	400
Lead	15.1
Mercury	0.89
Nickel	53.3
Selenium	23
Silver	4.01
Zinc	886
Antimony	4.5
Cyanide	7.54
PP'-DDD	0.270
OP'-DDD	0.120
PP'-DDE	0.350
Diethylhexyl Phthalate	71.1